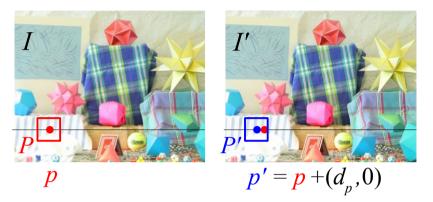
Renaud Marlet (ENPC) - 2018-2019

## Exercise 2: simple disparity map estimation (without moves nor occlusion)

• Given 2 rectified images I, I', estimate optimal disparity  $d(p) = d_p$  for pixels p = (u, v)



- Setting: linear multi-label graph construction (cf. pp. 85-96)
  - discrete disparities:  $d_n \in \mathcal{L} = \{d_{\min}, ..., d_{\max}\}$
  - $\mathcal{N}_p$ : 4 neighbors of pixel p
  - $-D_{p}(d_{p}) = w_{cc} \rho(E_{ZNCC}(P; (d_{p}, 0))) \text{ with } \rho(c) = \begin{cases} 1 & \text{if } c < 0 \\ \sqrt{1 c} & \text{if } c > 0 \end{cases}$
  - $-V_{na}(d_{n}, d_{n}) = \lambda |d_{n} d_{n}|$
- See material provided for the exercise on web site

(template code and detailed exercise description)  $N.B. \text{ only } w_{cc} / \lambda \text{ matters}$